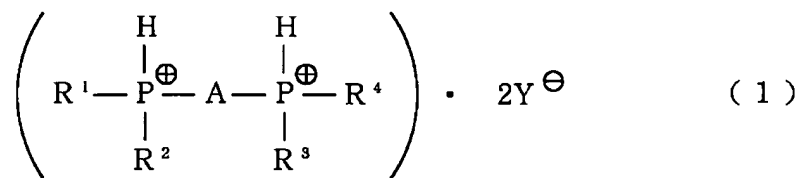


WHAT IS CLAIMED IS:

1. A bis-phosphonium salt represented by the following formula (1):



wherein R¹, R², R³, and R⁴ each represent a linear or branched alkyl group, a cycloalkyl group, an aryl group, or an aralkyl group; A represents an alkylene group; Y represents an anion; R¹ and R² may form a ring; R³ and R⁴ may form a ring; and R¹, R², R³, and R⁴ may be the same or different.

2. The bis-phosphonium salt according to Claim 1, wherein R¹ and R⁴ are the same, R² and R³ are the same, R¹ and R² are different from each other, and R³ and R⁴ are different from each other.

3. The bis-phosphonium salt according to Claims 1 or 2, wherein the anion is a halide ion or a sulfonate ion represented by the following formula (2):

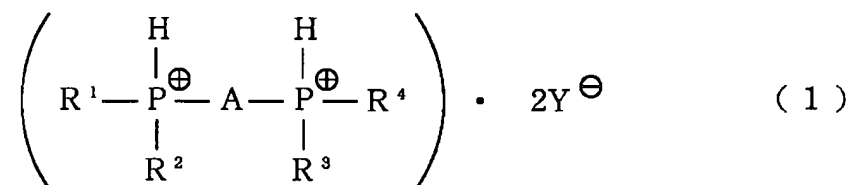


where R⁵ represents a monovalent organic group.

4. The bis-phosphonium salt according to Claim 3, wherein the anion is a bromide ion.

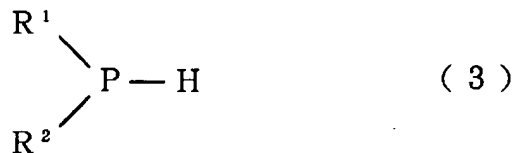
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5. A process for producing a bis-phosphonium salt represented by the following formula (1):



the process comprising:

10 a step of allowing a first secondary phosphine and second secondary phosphine to react with a compound in an alcohol solvent selected from a secondary alcohol and tertiary alcohol, wherein the first secondary phosphine is represented by the following formula (3):



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the second secondary phosphine is represented by the following formula (4):



and the compound is represented by the following formula (5):



where R^1 , R^2 , R^3 , and R^4 each represent a linear or branched alkyl group, a cycloalkyl group, an aryl group, or an aralkyl group; A represents an alkylene group; Y represents an anion; R^1 and R^2 may form a ring; R^3 and R^4 may form a ring; and R^1 , R^2 , R^3 , and R^4 may be the same or different.

10 6. The bis-phosphonium salt according to Claim 5, wherein R^1 and R^4 are the same, R^2 and R^3 are the same, R^1 and R^2 are different from each other, and R^3 and R^4 are different from each other.

15 7. The process according to Claim 5 or 6, wherein the anion is a halide ion or a sulfonate ion represented by the following formula (2):



where R⁵ represents a monovalent organic group.

8. The process according to Claim 7, wherein the anion is a bromide ion.

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9. The process according to any one of Claims 5 to 8, wherein the alcohol solvent is tert-butanol.

10. The process according to any one of Claims 5 to 9,
10 wherein the first and second secondary phosphines are the same.